REMARKS

Very thanks for Examination's suggestion and thanks for finding some citations about the present invention, thereby, the applicant may know more information about the invention. This case has been carefully reviewed and analyzed in view of the office action.

Indeed the citations disclose some features of the present invention, and the applicant agrees with these viewpoints, however applicant discovers that some features of the present invention are not wholly disclosed by the citations, which are claimed in the original specifications and especially drawings.

To make the present invention novel, the applicant decides to cancel Claims 1 to 6, without prejudice or disclaimer of the subject matter thereof, and add new claim 7. The new claim 7 is mainly from the combination of the original claims 1 to 5, and add the features illustrated in the first paragraph in page 5 of the specification, which is mainly related to the description of the output disk 4 and the related mechanism about the elements of 41, 42, 43, 44 and 45. Thereby it is assured that no new matter is added. The relation of the new claim with respect to the original claims are listed in the following

Claim 7. (New) ~~1.~~A piston rod rotary driving device of a screw nail gun; the driving ~~drivign~~ device being installed in a gun head 11 of the screw nail gun;

at least one pneumatic motor 2 installed in one end portion of the gun head; ~~comprising~~ the at least one pneumatic motor 2 being capable of being driven by high pressure air,

a cylinder 5 capable of loading high pressure air;

a piston rod 6 in the cylinder 5, one end of the piston rod 6

having a piston 61; the piston 61 being actuated by the high pressure air so as to trigger a screw nail to move linearly; another end of the piston rod being driven by the pneumatic motor to rotate the screw nail;

~~wherein~~ a spindle 27 of the pneumatic motor 2 ~~is~~ formed ~~installed~~ with a rod groove 28 for receiving the piston rod 6; and the spindle 27 of the pneumatic motor 2 driving ~~drives~~ an output disk 4 to rotate; the spindle 27 being connected to the piston rod 6; the piston rod being capable of receiving a nail locking rod 62 for driving a nail 63;

~~a plurality of polygonal supporting holes 42 being are formed at a center portion of the output disk 4; the piston rod 6 being is a polygonal rod so that the piston rod 6 can be coupled to the supporting holes 42 to move therein; and the output disk 4 drives the piston to rotate;~~.

~~2. The piston rod rotary driving device of a screw nail gun as claimed in claim 1, wherein~~ a planet gear set 3 being ~~is~~ installed between the spindle 27 of the pneumatic motor 2 and the output disk 4 for transferring rotation power.

~~3. The piston rod rotary driving device of a screw nail gun as claimed in claim 2~~ 1, ~~wherein~~ the planet gear set 3 being ~~is~~ formed by a driving gear 31 and a plurality of driven gears 32; the driving gear 31 being ~~is~~ firmly secured to a distal end of the spindle 27 of the pneumatic motor; and the driven gears 32 being ~~are~~ pivotally installed on the disk surface of the output disk; the plurality of driven gears 32 being ~~are~~ arranged around the driving gear 31 and being ~~are~~ driven by the driving gear 31 ~~so as to further drive the output disk 4 to rotate~~; and.

(from first paragraph of page 5 of the specification) an

output disk 4 extending with a neck portion 41, the neck portion 41 being pivotally installed to a bear seat 44; a center of the output disk 4 being formed with a polygonal support hole; a bush 43 having a shape like the supporting hole 42 being placed in the supporting hole 42 so as to receive the polygonal piston rod 6; thereby, the piston rod being movable in the bush 43; a plurality of pivotal shafts having one ends being pivotally installed on a disk surface of the output disk; another ends of the pivotal shafts being pivotally installed to the driven gears 32 of the planet gear set 3; the number of the pivotal shafts 45 being equal to that of the driven gears 32;and thus, the output disk 4 being driven by the planet gear set 3 to rotate and thus to drive the piston rod 6 to rotate.

~~4. The piston rod rotary driving device of a screw nail gun as claimed in claim 2, wherein the output disk is pivotally installed to a bearing seat;.~~

~~5. The piston rod rotary driving device of a screw nail gun as claimed in claim 1, wherein a bush with a shape identical to that of the supporting hole is installed in the supporting hole so as to install the piston rod in the bush; the piston rod is movable in the bush.~~

DISCUSSION THE NOVELTY OF THE PRESENT INVENTION

The new claim 7 is mainly from the combination of the original claims 1 to 5, and add the features illustrated in the first paragraph in page 5 of the specification, which is mainly related to the description of the output disk 4 and the related mechanism about the elements of 41, 42, 43, 44 and 45. Thereby it is assured that no new matter is added.

(A) In the present invention, **the mechanism for driving the piston rod 6 is performed by the spindle 27 of the motor 2 drives the driving gear 31; the driving gear 31 to drive one of a plurality of driven gears 32, the driven gear 32 drive one of a plurality of pivotal shafts 45 so as to drive the output disk 4; and thus the bush 43 of is driven; and then the bush 43 drives the piston rod 6 to move.** We combine the gear set 31, 32 and driving means 4, 41 to 5 integrally, and only one driving rod 6 is used.

However we can not found any similar structure in any of the citations, USP 5,750,035 or USP3,507,173. In the citation '035, the moving unit 7 (see Fig. 1 of the citation) is driven by a ball spine 14. The ball spine 14 is attached to the rotor 16 of the motor 13. A clutch 15 is installed between the moving unit 7 and the driving bit 9 so as to change the rotation speed of the driving bit 9.

The structure of the citation '035 is completely different from the present invention. In the citation '035, we cannot find any structure like the present invention as indicated above.

Similarly, as comparing with the citation '173, the gear sets 34, 35, 36, and 37 are installed between the driving rod 38 and the shaft 32, which is functioned as the above mentioned clutch 15 in the citation '035, so as to change the rotate speed ratio between the shaft 32 and rod 38. Furthermore, the shaft 32 is driven by the rotor 43 of the motor 42. Thus in the citation '173, it is illustrated that the gear set 34, 35, 36, and 36 is separated from the driving means 43. Furthermore, there are one shaft 32 and one rod 38 being used to drive a nail. Thus, we get the following conclusions:

(1) In the present invention, the gear set 32, 33 and the driving means 4, 41, 42, and 43 are connected one by one so as to driving the

driving rod 6. The driving rod 6 is an integral body, but in the citations '035 and '173 are gear set (15 in '035 and 34-36 in '173) is separated from the driving means (14 in '035 and 43 in '173) to drive the rod.

(2) Furthermore, in the present invention, the only one driving rod 6 is used. In the citation '035, the rods 7, 8 and 9 are used to drive a nail, and in citation '173, the rods 32, 38 are used to drive a nail.

(3) From above discussion, it is apparent that the structure of the present invention is simple than the citations '035 and '173. Only one rod is used, and the gear set 32 33 and the driving means 4 are integral formed. Furthermore, only one rod 6 is used.

(4) Furthermore, since in the present invention, only one rod is used, the structure is stable. In the citations, there are more than one driving rods are used (in citation '035, the rods are rods 7, 8 and, and in citation '173, the rods are rods 32, and 38), a clutch is used therebetween. Thus, the structure is unstable in operation. Thus, the prior art structures are easy to destroy.

(5) Furthermore, in the citations '035 and '173, a further driving means must be used to drive the clutch 15 in citation '035 or to drive the gear sets 34 to 37. The structure is complicated and cost is high.

(6) Even we combine the features of the two citations '035 and '173, the combination structures still has no feature of the present invention, namely, only one driving rod 6, and the gear set 31, and 32 are combined with the driving means 4 etc. Thus the combination of the two citations cannot form the present invention.

From above discussion, it is apparent that the present invention is novel and inventive.

(B) Some comparisons cited in the previous amendment are listed below, which are also effective to build the novelty of the present invention.

(1) In the present invention "at least one pneumatic motor 2 installed in one end portion of the gun head 11", but in the citation, USP 5,730,035, the motor 13 is in the middle section of the gun head and in the citation USP 3,507,173, the motor 42 is installed at the middle portion of the gun structure.

(2) In the present invention, the hole 42 and the piston rod 6 are polygonal, but the citation does not disclose anything about this.

Since in above discussion, it is apparent that no prior art has the features of the present invention, especially in new claim 8. Furthermore, as we know that no other prior art has features of the present invention. Thus, the present invention is novel and inventive.

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectively requested.

Respectfully submitted.

Yun-Chung Lee

Dated: 04/02/2005

235 Chung – Ho Box **8-24**

Taipei Taiwan R. O. C.